

Appl. No. : 09/727,105
Filed : November 29, 2000

REMARKS

In response to the Office Action, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments.

Discussion of the Claim Rejections Under 35 U.S.C. §§ 102(e) and 103(a)

In the Office Action, the Examiner rejected Claims 4, 6-19, and 25-38, under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,412,071, to Hollander, et al. (hereinafter "Holander"). Claims 1-3, 5, 20-24, and 39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,412,071, to Hollander, in view of U.S. Patent No. 5,909,545, to Frese, II et al. (hereinafter "Frese"). Applicant respectfully disagrees with these rejections of the claims, as amended.

Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. See M.P.E.P. § 2131. Furthermore, to establish a *prima facie* case of obviousness a three-prong test must be met. First, there must be some suggestion or motivation, either in the references or in the knowledge generally available among those of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success found in the prior art. Third, the prior art reference must teach or suggest all the claim limitations. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991). Applicant respectfully submits that at least one limitation from each of the above-listed claims is not taught, suggested, or described by the cited references.

Claims 1-4, 6, 15, 20, 22, 35, 38

One embodiment of Applicant's invention is directed to rewriting a binary of an application program. *The binary is modified prior to execution on a client device.* In one embodiment, the modified binary, when executed, does not interfere with the client device and/or the client device does not interfere with the operation of the modified binary. In one embodiment, an interception module an import table in the binary is modified such that an interception module is executed when the binary is executed.

Appl. No. : **09/727,105**
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Turning to the claims, it is seen that independent Claim 1, as amended recites: "a preprocessor module for identifying calls that are made by an application binary to at least one routine that is provided by an operating system, the preprocessor module, prior to execution of the application binary, modifying the application binary such that an interception module is invoked in response to the application binary invoking the identified calls." Independent Claim 2 recites "prior to execution of an application program, scanning the application program for code sequences that cause the computer to trap to the operating system; prior to execution of an application program, modifying the code sequences such that the computer does not trap to the operating system; . . . [and] prior to execution of the application program, storing the modified application program." Independent Claim 15, as amended, recites: "prior to execution of an application program, modifying a binary of the application program to invoke an interception service instead of requesting the service from the selected operating system." Independent Claims 3, 4, 6, 20, 22, 35, and 38 include similar types of applications.

Applicant respectfully submits that at least these limitations are not taught or suggested in isolation or in combination by Hollander and Frese. Hollander is generally directed to a method of providing buffer overflow related security for a computer system. *See* Abstract. In Hollander, an API interception module is inserted into a process address space of an application each time a process is created. Applicant respectfully submits that Hollander fails to teach or suggest static binary modification as claimed. In Hollander, the application program is modified at run-time, not statically, prior to the execution of the application program. Hollander states:

In the preferred embodiment of the present invention, the API Interception System model provides a means to intercept library calls performed in the computer system. An API Interception Module 134, 140, and 146 is injected by API Interception Control Module 111 into a process address space 118, 120, 122 each time a new process associated with an address space is created.

See col. 5, lines 40-46. Thus, Hollander does not teach or suggest static binary modification so as to include an interception module. Furthermore, Hollander does not teach or suggest storing a modified binary prior to the execution of the binary. *See e.g.*, Claim 2.

Furthermore, Applicant respectfully submits that these limitations are also not taught or suggested by Frese. Frese generally describes a system for allowing a user to remotely access and try-out the operation of a program over the Internet. However, Frese also fails to teach or suggest binary modification as is claimed.

Appl. No. : 09/727,105
Filed : November 29, 2000

Since the cited references fail to teach in isolation or in continuation at least the above-limitations, Applicant respectfully submits that the above claims are in condition for allowance.

Claims 7, 11, 14, 25, and 28

Independent Claim 7 recites “[a] intercepting at least one call that is made by the application such that a graphical user interface that is displayed by the application is modified; [b] intercepting at least one call that is made by the application program such that requests for machine or user specific information are virtualized; and [c] intercepting at least one call that is made by the application such that the contents of at least one file that is used by the application is encrypted transparently to the application.” For convenience of discussion, Applicant has added labels a, b, c, to certain of the limitations of Claim 7. Furthermore, certain of these limitations are also recited in independent Claims 11, 14, 25, and 28.

Applicant respectfully submits that the cited prior art fails to teach or suggest any of the above limitations. With respect to these limitations, the Examiner took the position that those features were taught or described in column 7, lines 49-53 of Hollander. Applicant respectfully disagrees with this rejection. Applicant respectfully submits that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. *See* M.P.E.P. § 2131. The cited section of Hollander determines whether a selected call is an illegal call. Limitation (a) is directed to modifying an API call for a graphical user interface function. Limitation (b) is directed to virtualizing requests for machine specific information. Limitation (c) is directed to transparently encrypting information. Applicant respectfully submits that none of these steps are described by the section relied upon by the Examiner. Applicant submits that the prior art must suggest the desirability of the claimed invention. *See* M.P.E.P. § 2143.01. The fact that references can be modified is not sufficient to establish prima facie obviousness. *Id.* Furthermore, the fact that the claimed invention is within the capability of one of ordinary skill in the art is not sufficient by itself to establish prima facie obviousness. *Id.* In this case, the Examiner has merely made conclusory findings that do not support a valid prima facie rejection.

Since the cited art fails to teach or suggest at least these limitations, Applicant respectfully submits that independent Claims 7, 11, 14 and 25 are in condition for allowance.

Appl. No. : 09/727,105
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Claim 5, 8-10, 12, 13, 21, 23, 26, 27, 29, 30, 36, 37, and 39

Since each of dependent Claims 5, 8-10, 12, 13, 21, 23, 26, 27, 29, 30, 36, 37, and 39, depends on one of independent Claims 4, 7, 11, 20, 22, 25, 28, 35, and 38, Applicant respectfully submits that these claims are allowable for the reasons discussed above and the subject matter of their own limitations.

Summary

Applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims for patentability purposes, the reasons therefore, and arguments in support of the patentability of the pending claim set are presented above. Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and the claims would satisfy the statutory requirements for patentability without the entry of such amendments. In addition, such amendments do not narrow the scope of the claims. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

Respectfully submitted,

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